AD-A156 926 THE DENTAL FITNESS OF ARMY WAR COLLEGE STUDENTS CLASS 1/1
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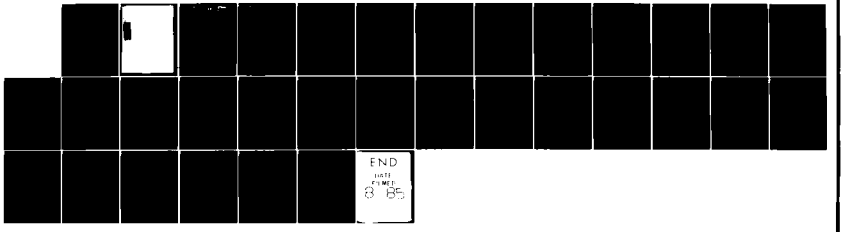

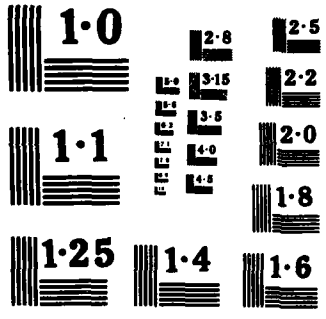
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The purpose of the study was to determine the dental fitness of the Army War College military students, Class of 1985. The information is intended to be used to provide information to help motivate the senior Army leadership in support of the proposed Army Oral Health Fitness Program. All soldiers need to be physically fit and ready for combat. Dental emergencies have been a significant factor in the past by taking soldiers away from their mission at inappropriate times both in peace and war. This potential loss of fighting strength can be largely prevented by an aggressive dental fitness program (Cont)

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initiated by the Dental Corps and fully supported by Army leadership. The study found that, on arrival at the Army War College, 74% of the class was in acceptable dental fitness. Fourteen students (6%) had dental conditions which could be potential dental emergencies within a year. Forty students (20%) were in an unknown status, either because they had not seen a dentist in over a year, or they neglected to turn in their records to the Carlisle Dental Clinic. Dental fitness was improved significantly over nine months so that 82% were in acceptable dental fitness, 1% a potential dental emergency, and 17% unknown. Forty-one (41) students did not have panoramic X rays in their dental records as of April 1985. The study recommended dental fitness be incorporated into the Army War College physical fitness assessment program.

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USAWC MILITARY STUDIES PROGRAM PAPER

THE DENTAL FITNESS OF ARMY WAR COLLEGE STUDENTS, CLASS OF 1985

AN INDIVIDUAL STUDY PROJECT

by

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30 April 1985

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TABLE OF CONTENTS

ABSTRACT

AUTHOR: Robert C. Webster, COL, DC

TITLE: The Dental Fitness of the Army War College, Class of 1985

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The purpose of the study was to determine the dental fitness of the Army War College military students, Class of 1985. The information is intended to be used to provide information to help motivate the senior Army leadership in support of the proposed Army Oral Health Fitness Program. All soldiers need to be physically fit and ready for combat. Dental emergencies have been a significant factor in the past by taking soldiers away from their mission at inappropriate times both in peace and war. This potential loss of fighting strength can be largely prevented by an aggressive dental fitness program initiated by the Dental Corps and fully supported by Army leadership. The study found that, on arrival at the Army WAr College, 74% of the Class was in Acceptable Dental Fitness. Fourteen students (6%) had dental conditions which could be potential dental emergencies within a year. Forty students (20%) were in an unknown status, either because they had not seen a dentist in over a year or, they neglected to turn in their records to the Carlisle Dental clinic. Dental fitness was improved significantly over nine months so that 82% were in acceptable dental fitness, 1% a potential dental emergency, and 17% unknown. Forty-one (41) students did not have panoramic x-rays in their dental records as of April 1985. The study recommended dental fitness be incorporated into the Army War College physical fitness assessment program.

LIST OF TABLES

CHAPTER I

INTRODUCTION

PURPOSE

The purpose of this study was to determine the Dental Fitness categories of senior military officers at the start of their Army War College Year and then again near their graduation.(1) The information is intended to be used to provide information to help motivate the senior Army leadership in their support of the proposed Army Oral Health Fitness Program.(2)

BACKGROUND

All soldiers need to be physically fit and in total health to be ready for the rigors of war. Dental emergencies have been a significant factor in the past by taking soldiers away from their mission at inappropriate times both in peace and war. This potential loss of fighting strength can largely be prevented by an aggressive Oral Health Fitness Program when initiated by the Army Dental Corps and fully supported by the Army leadership. Only through the full cooperation, support, and direction from unit commanders, can soldiers with potential dental emergencies, identified by a dentist, be sent to the dental clinic for preventive care.

The Army War College graduate is a leader who will have significant

input into the future readiness of the Army. He must set the example in all areas of fitness, which includes dental fitness. The dental fitness of senior military officers, as an isolated group, has not been studied and may therefore provide vital information which will support the Army Dental Corps' effort to improve this important aspect of readiness.

DEFINITIONS (3)

DENTAL CONDITIONS are the oral or dental diseases, injuries, abnormalities, and situations which are regarded as pathologic, dysfunctional, or cosmetically unacceptable. In the absence of any dental condition, a person would be in optimal dental and oral health (fitness).

DENTAL EMERGENCY is an acute episode of a dental or oral condition which becomes painful or threatens to become systemically debilitating. In a military setting the definition is expanded to include conditions which the patient genuinely perceives to be severe enough to cause him to leave his duty station to seek treatment. If a soldier leaves his duty station he becomes a casualty. This does not include deliberate malingering.

DENTAL EMERGENCY CARE must be provided at the most austere level of dental support in order to return fighting troops to duty, directly and immediately.

DENTAL EMERGENCY RATES are expressed as the number per thousand troops supported per year for all military personnel treated.

DENTAL FITNESS CATEGORIES(4):

Dental fitness 1 - Personnel who require no dental treatment.

Dental fitness 2 - Personnel whose existing dental condition is unlikely to result in a dental emergency within 12 months.

Dental fitness 3 - Personnel who require dental treatment to correct a dental condition that is likely to cause a dental emergency within 12 months.

Dental fitness 4 - Personnel who require a dental examination and those whose fitness status is unknown. Active duty soldiers who miss a second annual exam are automatically placed in fitness 4 category.

METHODOLOGY

Overview

The dental records of all senior military officers assigned to the United States Army War College, Class of 1985 were reviewed by the author. The data collected from these dental records were as follows: Name; social security number; age; branch of service; dental fitness as of August 1984 (start of class); date of last dental treatment or examination by a dental professional prior to arriving at Carlisle Barracks; the number and type of dental appointments/treatment at the Carlisle Barracks Dental Clinic as students during the first nine months of the AWC; dental fitness as of April 1985; and the presence of a panoramic X-ray in the record as of April 1985.

Procedure

a. A roster of all (231) military officers assigned to the Army War College, Carlisle Barracks as resident students, Advanced Operational Studies Fellows, Army Research Associates, and USMA Fellow, Class of 1985 was obtained from the Administrative Division of the Army War College, Carlisle barracks.

b. The Dental Records of AWC students, Class of 1985, filed by terminal

digit at the Army Dental Clinic, Dunham Health Clinic, Carlisle Barracks, Pa., were methodically screened by the author. The following format was used to collect data (see Appendix I): The name, social security number, age, and branch was recorded from the individual dental records. The dental fitness classification of each officer was established by carefully screening the history of dental treatment and diagnostically reading the appropriate dental x-rays found in each dental record. (Periapical, bite-wing, and panoramic x-rays were used in conjunction with the descriptive remarks recorded in block 17. SERVICES RENDERED, diagnosis and treatment, section.) The number of visits and the type of treatment received at the dental clinic were recorded for each patient. A records review or records screening by the custodial dental facility was not considered in determining the last visit before arriving at Carlisle Barracks, or counted as a visit to the dental clinic here at the AWC. It was also noted if an adequate panographic x-ray was or was not present in the dental record.

c. Students whose records could not be found at the Dental clinic were notified by letter to make an appointment with the dental clinic for an exam or to contact the author so that all 231 records for the class of 1985 might be screened (see Appendix II). In all, 216 records eventually were examined.

d. The collected data was then tabulated. First the dental fitness status of American military students attending the Army War College (Table 1) was determined. The number of months since the last dental examination or treatment (Table 2), and the total number and type of dental visits (Table 4) required to bring these students to their present dental fitness was calculated. Then the dental treatment statistics of the class 3 (potential for dental emergency) students was tabulated and analyzed (Table 3). Finally the number of records missing adequate panoramic x-rays (required for mass casuality identification) were determined. The results of the study are

discussed in the Conclusions and Recommendations chapter.

Literature Review

Information on the military dental emergency rates, their prevention, the major preventable causes of dental emergencies, the ability to predict potential dental emergencies from dental records, and a brief look at current efforts to improve dental fitness by the Army was collected from journals, magazines, unpublished reports, guidance from Army Dental Corps leadership, and personal communication. The literature was secured from the Library, United States Army War College, Carlisle Barracks, Pa.; US Army Health Care Studies And Clinical Investigation Activity, Fort Sam Houston, Texas; and the Academy of Health Sciences, United States Army, Fort Sam Houston, Texas.

ENDNOTES

1. US Department of the Army, Army Regulation AR 40-3, Chapter 10 Dental Care, proposed revision, p. i. (hereafter referred to as "AR 40-3")

2. US Department of the Army, Army Regulation AR 40-35, Preventive Dentistry, proposed revision, p. ii.

3. J.E. King and D.G. Brunner, Theater of Operations Dental Work Load Estimation, p. 1-2

4. "AR 40-3" p. v.

Table 2

LAST DENTAL APPOINTMENT PRIOR TO THE ARMY WAR COLLEGE

MONTHS

(since last clinical entry into dental record prior to August 1984)

0 - 6	7 - 12	13 - 18	19 - 24	25 - 30	31 - 36	37 - 42	>43	Unknown
- Number of officers -								
114	48	19	6	3	1	4	3	18

Number seen within one (1) year - 162
" " " two (2) years - 25
" " " three (3) years - 9
" " " four (4) years - 5
" " over four (4) years - 3

Unknown- record initiated at AWC) - 18

TABLE 1

DENTAL FITNESS CATEGORY

1. Dental Fitness upon arrival at the AWC - August 1984

Dental Fitness category 1 - 99 ---I
)---- 172 (80%) Acceptable Dental Fitness
Dental Fitness category 2 - 73 ---I

Dental Fitness category 3 - 14 ---I
)---- 44 (20%) Unacceptable - potential
Dental Fitness Category 4 - 30 ---I dental emergencies

2. Dental Fitness nine months into AWC - April 1985

Dental Fitness category 1 - 135 --I
)---- 189 (88%) Acceptable Dental Fitness
Dental Fitness category 2 - 54 --I

Dental Fitness category 3 - 1 --I
)---- 27 (12%) Unaccepptable - potential
Dental Fitness category 4 - 26 --I dental emergency

3. AWC Student has a panoramic x-ray in dental record:

Yes - 175 (81%)

No - 41 (19%)

Note: Numbers and Percentages are based on the 216 dental records on file at the US Army Dental Clinic.

combat readiness and quality of life is the ultimate goal of the Army Medical Department and should not be compartmentalized. "To Conserve the Fighting Strength" is a total person concept which is only as strong as its weakest link. The Commander is ultimately responsible to insure that the total soldier is combat ready in which fitness incompasses strength, cardiovascular health, nutrition, Type A modification, Low body fat, endurance, coping with stress, alchol moderation, no smoking, general health /fitness, and DENTAL FITNESS.

Class of 1985 made marked improvement as the acceptable dental fitness categories (Class 1 and 2) jumped from 172 (80%) to 189 (88%) in just nine months. All of the students who were Class 3 (potential dental emergencies) at the start of the academic year were dentally fit (Class 1 or 2) by mid April 1985. At this point in time the only American military students of the 1985 Army War College Class who might have unidentified potential dental emergency conditions are those who have not sought dental treatment.

Another area which needs to be improved by the dental corps is to insure that each dental health record contains an up to date panographic x-ray or its equivalent. It was found that as of April 1985 there were still forty-one (41) or eighteen percent (18%) of the student dental records on file that did not contain a panoramic x-ray or its equivalent. The panoramic x-ray is a valuable dental diagnostic tool to discover hidden pathology and is used as an aid to determine general oral health or fitness. However, it is mandatory for inclusion in the dental record due to its tremendous value in identification procedures. Most modern dental facilities have panoramic x-ray capability so it is important to insure administratively that a panoramic x-ray is a part of every active duty soldier's dental record.

Recommendations: Every effort should be made to expose military leadership at all levels to the fact that dental fitness is an integral part of total health and fitness. The dental factor of fitness is often left out of the equation when addressing readiness capabilities of units and even in the established Armed Forces Physical Fitness Program as presently structured. This author feels that a Dental Fitness evaluation should be incorporated into the excellent Physical Fitness Assessment which the Army War College Student receives at Carlisle. Even though the dental care which AWC students presently receive at Carlisle Barracks is excellent, it is in isolation from the Fitness Program. The <u>total</u> Health and Fitness of our Army to enhance

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

The research supports the fact that the future senior leadership of the Army, and other armed services, are human beings just like the other soldiers, sailors, marines, and civilians who have dental conditions which need routine attention. If we are to avoid that ill-timed, frustrating, painful readiness detractor of a full blown dental emergency, we must get our senior leadership on the Dental Fitness Program bandwagon. As shown by this study some of our leaders have a ways to go in order to set the example. We, as senior leaders in the military are still vulnerable to this age-old problem, and with that awareness should broadcast the message loud and clear, that dental fitness is attainable but that it needs command support for reality.

It is gratifying to know that at least 3/4ths (76%) of the 231 senior American military officers in residence at the AWC saw fit to seek dental care during the first nine months of the 10 month curriculum. Hopefully the 54 (24%) of AWC students (39 of those with records on file plus the 15 who never turned in their records) who have not been examined at least within the year, can take advantage of the convenient access to dental care during their final stretch at the Army War College.

Even without the benefit of a full year to set the standard, the AWC

condition which most commonly causes the emergency visit. This statistic is supported when determination was made of the dental condition which placed the 14 AWC students in Class 3. For 8 (58%) were caries (decay) related; for 3 (21%) were periodontially (gum disease) related; for 2 (14%) were endodontically (root canal) related; and for 1 (7%) oral surgery (third molar) related.

DENTAL TREATMENT RECEIVED, FIRST NINE MONTHS AT THE AWC

(August 1984 thru April 1985)

(Table 4).

The 216 dental records on file at the dental clinic indicate that 176 (81%) AWC students had visited the dental clinic for appointments ranging from annual examination to a variety of treatments. These 176 patients had 548 visits to the dental clinic during the nine months, August 1984 thru April 1985, for an average of 3.1 visits per patient. Thirty-four (34) had 3 or more visits within a range of one visit to a maximum number of thirteen visits.

Of the 176 who sought dental care during the 9 months, one hundred seventy one (171) received an examination; ninety-one (91) received a prophylaxis (cleaning); ninety-one (91) required restorative dentistry (fillings); twenty-two (22) required crowns or bridges; three (3) received partial dentures; sixteen required periodontal therapy (treatment for gum disease); eight (8) required oral surgical treatment (extractions, biopsy, third molars); and four (4) needed endodontic treatment (root canals).

3 (potential dental emergencies within a year), and thirty (30) (14%) were Class 4 (Had not been examined within the last year or no record on file). This means that 44 officers (20%) were not as dentally fit as they should be. If you add the Fifteen Officers whose records were not surveyed (automatic Class 4) the percentages would change as follows: Class 1 and 2 - 74%; Class 3 - 6%; Class 4 - 20%; or 59(26%) AWC Students, Class of 1985 were not dentally fit on assignment to the War College.

By the end of April 1985 (nine months opportunity for dental care), one hundred eighty nine (88%) officers were now Class 1 or 2; only one (1%) was Class 3 (Emergency abscess - under control); and twentysix (12%) were Class 4. When the fifteen records not available to review are added, the percentages change as follows: Class 1 and 2 - 82%; Class 3 - 1%; Class 4 - 18%.

LAST DENTAL APPOINTMENT PRIOR TO THE ARMY WAR COLLEGE

(TABLE 2.)

It was determined from the 216 dental records reviewed, how many months it had been since the officer's last appointment to a military dental clinic. It was found that 114 officers had visited a military dental clinic within 6 months of starting classes at the AWC in August 1984; 48 within 1 year; 25 within 2 years; 8 within 4 years; and 3 over 4years (of which one officer had not been seen for 7 years). Eighteen of the records were new since starting the War College and therefore this statistic could not be collected from them.

DENTAL FITNESS CATEGORY 3 (POTENTIAL FOR DENTAL EMERGENCY)

(Table 3)

As most dental emergency studies show, dental decay is the dental

CHAPTER III

ANALYSIS OF DATA

REVIEW

The Two hundred sixteen (216) Army War College, Class of 1985 Dental Records on file at the U.S. Army Dental Clinic, Carlisle Barracks, Pennslyvania were reviewed. Fifteen (15) Dental Records from the Class of '85 could not be reviewed because they had never been turned in to the Dental Clinic by the respective Offiers as of Mid April 1985. A Letter (appendix I) was sent out in mid April 1985 requesting that the missing records be turned in to the Dental Clinic. As of this date the missing records have never been turned in, in compliance with Army Regulation . Therefore the Key Fitness Categories 1,2,and 3 could not be established for these Fifteen (15) Officers. In accordance with the Dental Fitness Classification definition these fifteen officers would be automatically placed in category 4.

DENTAL FITNESS CATEGORIES

(Table 1.)

Of the 216 Officer's dental records examined for their dental fitness categories at the beginning of their War College Year (Aug 1984), 172 (80%) were Cl 1 or 2 (acceptable readiness/fitness). Fourteen (14) (6%) were Class

Field Training Exercises", Military Medicine, April 1981, p. 265.

7. J.J. Hyman, "The Treatment of Dental Emergencies at a Naval Training Facility", Military Medicine, March 1984, p. 134.

8. Jennings, p. 5.

9. M. Cohen and J. Cecil, Dental History Predictors of Caries Related Dental Emergencies, abstracted by author.

10. King, p. 5-1

11. Jennings, p. 3.

12. Payne, p. 265.

13. P.S. Grover, et al., Predictability of Dental Emergencies by Panography, abstract by author.

14. H.T. Chandler, Assistant Surgeon General for Dental Services, letter to Col Walter, A Brusch, Chairman of the Ad Hoc Committee Oral Health Maintenance, 12 February 1985.

15. Chandler, Incl 2.

16. Chandler, Incl 1.

17. R.H. Bishop, "HSC:Readiness Demands Healthy Soldiers", Army 1980, p. 187.

18. Kuttas, p. 5.

19. US Department of the Navy, SECNAV INSTRUCTIONS 6600.2, Operational Readiness Dental Standards, p. 1.

20. US Department of the Air Force, Air Force Manual 30-130, Dental, Health, and Immunization Procedures, p. 8-1, 8-3.

21. H.T. Chandler, Assistant Surgeon General for Dental Services, letter to Col Walter A. Brusch, Dental Studies Division, (Appointed Chairman of task force - Revision OHMP) 20 September 1984. Incl 1.

22. Chandler, (Sept 1984), p. 1.

23. US Department of the Army, Army Regulation AR 40-3, Chapter 10 Dental Care, proposed revision, p. 1.

recommendations of these senior dental corps commanders will be the basis for the proposed improvements to the AOHMP.(21) A task force, with Colonel Walter A. Brusch, DC as Chairman was appointed by MG H. Thomas Chandler in Sept 1984 with a goal to implement the revised OHMP by June 1985. LTC Jeryl D. English was point of contact for the Office of the Assistant Surgeon General for Dental Services.(22) On 6 - 8 February 1985 the Senior Dental Service Policy Council placed revision of the OHMP as priority number one for The Army Dental Corps in CY1985. The task force met 11 - 15 March 1985 and formulated the proposed Oral Health Fitness Program based on careful study, experience, and guidance provided by the Chief of the Army Dental Corps.(23) If adopted, this author feels that the Army will then finally have a meaningful program to dentally "Conserve the Fighting Strength". The success of this program ultimately depends on the close cooperation between the dental clinics and supported units and the line's understanding and full support of this important Readiness tool.

ENDNOTES

1. J.E. King and D.G. Brunner, Theater of Operations Dental Work Load Estimation, p. 2-1, 2-2.

2. P.S. Grover, et al., "Dental Emergencies Occuring Among U.S. Army Recruits", Military Medicine, February 1983, p. 57.

3. D.E. Jennings, Dental Readiness and the AOHMP, p. 2.

4. G. Kuttas, "Reflections from The Chief of the Army Dental Corps", Medical Bulletin of the US Army, Europe, September 1982, p. 5.

5. W.E. Ludwick, et al., "Dental Emergencies Occuring Among Navy-Marine Personnel Serving In Vietnam", Military Medicine, February 1974, p. 123.

6. T.F. Payne and W.R. Posey, "Analysis of Dental Casualties in Prolonged

Minimum dental standards for unit readiness are established at 80% of unit personnel in dental classification 1 and 2. Type and force commanders are encouraged to exceed this standard." Commanding officers of dental activities are responsible to provide dental status rosters on a quarterly basis. Commanding officers of fleet units and shore activities are responsible to ensure an effective dental treatment program is provided for all members and to maintain direct liaison with dental units to ensure adequate data is provided.

The Air Force has a computerized system, operated through their Consolidated Base Personnel Offices (CBPOs), to notify individuals and their units of their annual dental exam.(20) A monthly updated follow-up roster reporting the names of those personnel who did not report for dental examination is sent to the units until the appointment is kept. A unit representative, not the commander, takes action to reschedule individuals for dental examination when necessary, or takes other appropriate action. The dental facility provides data items, the DENTAL CLASSIFICATION STATUS, and THE DATE OF THE LAST DENTAL EXAM for computerized input to the CBPO. The appropriate installation commander is informed when the unacceptable combined or individual unit's noncompliance rate affects the primary function of the activity or the health of the unit members involved. Guidance for this Air Force Dental Program is found in AFM 30-130 Volume II, 5 July 1982. The computerization of this program is excellent, however, there is not enough emphasis in ensuring follow up care, other than emphasis on the annual dental exam, regardless of the Dental Classification Status.

The Army Dental Corps is taking action in 1985 to ensure timely improvements in the Oral Health Maintenance Program for the active duty soldier. The AOHMP was a major issue discussed in depth by two different study groups at the Dental Plans and Operations Course in May 1984. The

Medical Command Dental Conference in the fall 1981 - "Reflections From The Chief Of The Army Dental Corps", put forth his ideas and solution for the ineffective Oral Health Maintenance Program which only required an annual birth month examination. He states "It is true that we have experienced a very high rate of participation in the annual dental examination. But the percentage of soldiers who complete the follow-up treatment required to restore them to oral health is not much higher that it was before the program was started. ....The chain of apathy and neglect which time after time caused the US Army to send its soldiers to war dentally unprepared must be broken. Therefore, the Oral Health Maintenance Program will be revised so that participation rates will not be used as a measure of success. Instead, every deployable unit will be given a dental readiness profile which will reflect the dental health of the unit. ....The Commander alone can make this decision. The Program will introduce a risk factor into his equation that has up to now been ignored. With the information provided by the program the commander can strike a proper balance of dental preparedness, training, and maintenance. It will be the job of DENTAC commanders to work with the line commanders to schedule treatment at times that are least disruptive to his other priorities."(18) Unfortunately Major General Kuttas' proposal for change in the AOHMP was not accepted by the Department of the Army but it laid the ground work for today's proposed "Oral Health Fitness Program" which will provide timely and important dental fitness information for the line commander's use to improve the combat readiness of his troops.

The other services have already implemented Dental Readiness Programs to ensure optimal operational readiness and sustainability. The Navy and Marine Corps have a new program called Operational Readiness Dental Standards which was implemented 24 May 1984.(19) Its policy states "Commanding officers must be aware that dental disease is an issue which impacts operational readiness.

health of patients at one Navy facility was examined in 1981. It was determined that dental emergencies due to caries (cavities, decay) could be reliably predicted on the basis of historical information in the dental record.(9) Several other studies have shown that dental decay is the most common cause of dental emergencies, occuring from 39% to over 50% of the time.(10,11,12) In another study, the panoramic X-ray when used alone and properly interpreted, was able to predict 19% of the recruits who would report for emergency dental care within a six month period.(13) All these studies point out that through careful screening of dental records and X-Rays, potential dental emergencys (19% to over 60%) can be predicted quite accurately.

In recognition of the fact that our present Army Oral Health Maintenance Program has been ineffective, the Chief of the Army Dental Corps, MG H. Thomas Chandler directed that the appointed Ad Hoc Committee on Oral Health Maintenance formulate and recommend policy/programs/changes which insure that active Army soldiers do not become "noncombat dental casualties".(14) In the DENTAL OBJECTIVES 84-85 established in January 1984 by the Chief of the Army Dental Corps the revision of the Oral Health Maintenance Program (OHMP) was priority number eighteen.(15) The DENTAL OBJECTIVES 85-86 have Oral Health Fitness Program as priority number one.(16) This subject is not new but it is now, finally, getting the emphasis and action needed to implement an effective dental fitness program.

Back in 1980, MG Raymond H. Bishop Jr. then Commander, Health Services Command, in his article, HSC:READINESS DEMANDS HEALTHY SOLDIERS, stated "The combat readiness and effectiveness of the Army is dependent on keeping American soldiers healthy. Oral health is an integral part of the soldier's well-being, and the job of our military dental service is to care for that aspect of the soldier's health".(17) MG George Kuttas, addressing the 7th

CHAPTER II

LITERATURE REVIEW

The Importance of the Dental Corps in preserving Combat power is often underestimated and not considered by line commanders when estimating the readiness of their soldiers. This was brought out during the period from 1969 to 1984 in various studies which have reported the annual emergency rates among ground forces (Army, shore-based Navy and Marine Corps personnel) to be between 140 and 234 per thousand per year.(1,2,3,4,5,6) A 1981 study of Navy personnel on a Navy vessel (oiler) on extended deployment in the Indian Ocean computed out an annual dental emergency rate of over 250 per thousand.(7) In spite of the current Army Oral Health Maintenance Program (AOHMP) used by the Army, the Army has been far from successful in alleviating dental casualties, at inopportune times, which in most instances probably could have been prevented.

In a 1984 study of an Infantry Battalion, 82nd Airborne Division, deployed to the Sinai, Egypt, it was demonstrated that the AOHMP in its present form (without proper follow up) was not working. However, it was shown that a program that identifies and treats Dental Fitness Classification 3 soldiers could significantly reduce dental emergencies. If the potential dental emergency patient was treated (brought into Class 2), it was estimated that the dental emergency rate could be reduced 40% to 60% per thousand troops per year.(8) The incidence of Dental Emergencies and the relative oral

Table 3

DENTAL FITNESS CATEGORY 3 (POTENTIAL FOR DENTAL EMERGENCY)

ID	Last visit	#/Type of Tx at AWC*	Cl April 85	Potential emerg
26	unknown	4 / E,O	1	Caries
62	unknown	4 / E,P,O	1	Caries
77	June 84	2 / E,O	2	Caries
82	July 77(84)	4 / E,P,O	1	Caries
84	unknown	13 / E,O,C&B,Endo	1	Abscessed tooth
85	Aug 81 (39)	5 / E,O,P	1	Caries
91	July 84 (1)	5 / E,C&B,Endo	2	Abscessed tooth
97	April 84 (3)	8 / E,P,Perio,Pros	1	Periodontal
99	unknown	4 / E,O	1	Caries
120	April 83 (15)	3 / E,O,P	2	Caries
131	June 84 (1)	4 / E,P,Perio	1	Periodontal
144	unknown	12 / E,O,P,O.S.,Pros	2	Caries
198	unknown	9 / E,P,O.S.	2	O.S. (3rd molars)
205	Sept 83 (10)	3 / E,Perio	2	Periodontal

* Type of dental appointment: E = Examination
P = Prophalyxis (cleaning teeth)
O = Restorative (fillings)
O.S.= Oral surgery (extraction of teeth)
Perio = Periodontal (gum disease)
C&B = Crowns or Bridges
Pros = Partial Dentures

Summary: (a) The Dental fitness improvement, over nine months, of the fourteen (14) original potential dental emergencies (class 3) required a total of eighty (80) dental appointments. Each patient averaged 5.71 appointments (80 appts./14 Patients) to attain their present (April 1985) acceptable dental readiness.

(b) Causes of potential dental emergencies:

1. Caries (deep decay)	8 students	=	58%
2. Periodontal (gum disease)	3 "	=	21%
3. Endodontics (root canal)	2 "	=	14%
4. Oral Surgery (third molars)	1 "	=	7%
Total =	14 "	=	100%

TABLE 4

DENTAL TREATMENT RECEIVED
(August 1984 through April 1985)

			TYPE OF TREATMENT RECEIVED							
# RECORDS	# PT TX	# OF APPTS	EXAM	PRO	OPER	C&B	PROS	PERIO	OS	ENDO
216	176	548	171	91	91	22	3	16	8	4

Notes: Type of treatment recieved indicates the number of patients who required that particular type of care and does not represent the number of visits it took to complete the care.

Summary: Eighty-one percent (81%) of the students with dental records on file sought dental care within the first nine months while at the AWC. The 176 students who sought care visited the dental clinic an average of 3.1 times. Sixty-eight percent (68%) or Three hundred seventy seven (377) visits were for treatment other than for an examination. When considering the total American military officers (231) in the class the percentage who sought dental care drops to seventy-six percent (76%)

BIBLIOGRAPHY

Bishop, R.H.Jr. "HSC:Readiness Demands Healthy Soldiers". Army Oct 1980, pp. 184-187.

Cassidy, J.B. "Why Preventive Dentistry? The Problem Is Elephants". J Am Soc Prev Dent October 1970, pp. 7-8,16,30.

Chandler, H.T., Assistant Surgeon General For Dental Services, Subject: Appointed Chairman of task force-revision OHMP. Letter to Col Walter A Brusch, Dental Studies Division, US Health Services Command, 20 September 1984.

Chandler, H.T., Assistant Surgeon General For Dental Services, Subject: Guidance from the Senior Policy Council on Oral Health of the Active Duty Soldier. Letter to Col Walter A. Brusch, Dental Studies Division, US Health Services Command, 12 February 1985.

Cohen, M.E., and Cecil, J.C. Dental History Predictors of Caries Related Dental Emergiences. Naval Dental Research Institute Progress Report, NDRI-PR 88-09, Great Lakes, Ill. November 1981.

Diehl, M.C. "Design of an Automated Dental Epidemiology System". Military Medicine, Vol. 149, August 1984, pp.454-456.

Grover, P.S., Carpenter, W.M., and Allen, G.W. "Dental Emergencies Occurring Among U.S. Army Recruits". Military Medicine, Vol. 148, February 1984. pp. 56-57.

Grover, P.S., Carpenter, W.M., and Allen, G.W. Predictability of Dental Emergencies by Panography. Army Inst of Dental Research, Washington DC. Report September 1981.

Hyman, J.J. "The Treatment of Dental Emergencies at a Naval Training Facility". Military Medicine, Vol 149, March 1984, pp.134-136.

Jennings, D.E. Dental Readiness and the AOHMP. Second Brigade Dental Surgeon, 82nd Airborne Division. Study 1 August 1984.

King, J.E. and Brunner D.G. Theater of Operations Dental Work Load Estimation. Dental Studies Division, US Army Health Care Studies and Clinical Investigation Activity, Fort Sam Houston, Texas. Final Report May 1984.

Kuttas, G. "Reflections from The Chief of the Army Dental Corps." Medical Bulletin of the US Army, Europe. Vol. 39, Septembeder 1982, pp. 2-6.

Ludwick, W.E., Gendron, E.G., Pogas J.A., and Weldon A.L. "Dental Emergencies Occuring Among Navy-Marine Personnel Serving In Vietnam." Military Medicine. Vol.139 February 1974, pp.121-123.

Parker, W.A., King, J.E., and Brunner D.G. Assessment of the Relationship Between Past Dental Experience and Dental Sick Call In the Field. Dental Studies Office Report #81-013. Fort Sam Houston,Texas: Academy of Health Sciences, 1981.

Payne, T.F., and Posey W.R. "Analysis of Dental Casualties In Prolonged Field Training Exercises". Military Medicine, Vol. 146, April 1981, pp. 265-271.

US Department of the Army. Army Regulation 40-3, Chapter 10:DENTAL CARE. (proposed revision). Dental Studies Division, US Army Health Services Command, Fort Sam Houston, Texas. 20 March 1985.

US Department of the Army. Army Regulation 40-35 :Preventive Dentistry (proposed revision). Dental Studies Division, US Army Health Services Command, Fort Sam Houston, Texas. 28 March 1985.

US Department of the INavy. SECNAV INSTRUCTIONS 6600.2 :Operational Readiness Dental Standards. Office fo the Sectretary, Washington, DC. 24 May 1984.

US Department of the Air Force. Air Force Manual 30-130, Vol II Chapter 8:DENTAL, HEALTH, AND IMMUNIZATION PROCEDURES. Washington, DC., 2 July 1982.

APPPENDIX 1

FORMAT

NAME/SS#	AGE	BRANCH	CLASS-84	CLASS-85	LAST VISIT	#APPTS	PANO

1. NAME / SOCIAL SECURITY NUMBER
2. AGE
3. BRANCH OF ARMY OR SERVICE BRANCH
4. DENTAL READINESS CLASSIFICATION AS OF AUGUST 1984
5. DENTAL READINESS CLASSIFICATION AS OF APRIL 1985
6. LAST DENTAL VISIT PRIOR TO ARRIVING AT CARLISLE BARRACKS
7. NUMBER OF DENTAL APPOINTMENTS/TYPE WHILE A STUDENT AT THE AWC
8. NEEDED PANOREX TAKEN AT CARLISLE BARRACKS (EITHER HAD NONE OR NOT ADEQUATE)
9. IF CLASS 3 DENTAL FITNESS CATEGORY, WHAT WAS THE CAUSE?

   ENDODONTIC

   PERIODONTAL

   ORAL SURGICAL

   RESTORATIVE (CARIES)

   OTHER

APPENDIX 2

LETTER TO STUDENTS

10 APRIL 1985

NAME OF STUDENT BOX NUMBER
ARMY WAR COLLEGE
CLASS OF '85

DEAR CLASSMATE,

IN SCREENING AND REVIEWING THE DENTAL RECORDS OF OUR CLASS AS A PORTION OF MY MILITARY STUDIES PROGRAM, I HAVE BEEN UNABLE TO FIND YOUR DENTAL RECORD. IT HAS BEEN ALMOST OR AT LEAST ONE YEAR SINCE YOUR LAST REQUIRED ANNUAL DENTAL EXAMINATION. IN ORDER TO COMPLETE MY STUDY AND TO INSURE YOUR CONTINUED DENTAL HEALTH I WOULD APPRECIATE IT IF YOU COULD HAVE A DENTAL EXAMINATION WITHIN THE NEXT TWO WEEKS. EXAMINATION APPOINTMENTS CAN BE MADE AT THE US ARMY DENTAL CLINIC, LOCATED IN THE DUNHAM HEALTH CLINIC, CARLISLE BARRACKS, BY CALLING:4542, BETWEEN THE HOURS OF 0730 AND 1600HRS.

PLEASE BRING YOUR DENTAL RECORD WITH YOU TO YOUR APPOINTMENT. IF YOU DO NOT HAVE A DENTAL RECORD THEY WILL MAKE A NEW ONE FOR YOU. (HOWEVER, IT IS MUCH BETTER TO HAVE YOUR OLD RECORDS AND X-RAYS FOR A MORE COMPREHENSIVE EXAMINATION.) IF YOU NEED FURTHER INFORMATION OR WANT TO MAKE DIFFERENT ARRANGEMENTS FOR YOUR DENTAL EXAMINATION PLEASE CONTACT ME.

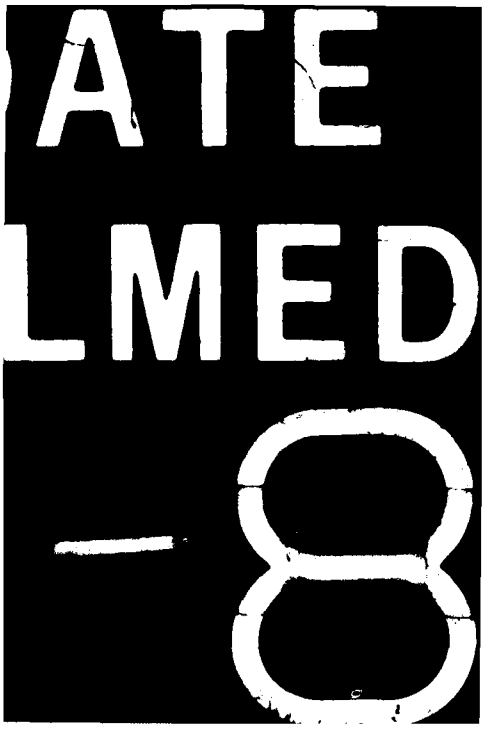
NOW IS AN EXCELLENT TIME TO FIND OUT YOUR DENTAL STATUS BEFORE YOU GET INTO THE HECTIC PACE OF YOUR NEXT ASSIGNMENT. I APPRECIATE YOUR SUPPORT IN THIS IMPORTANT ASPECT OF YOUR TOTAL HEALTH. AGAIN, PLEASE CONTACT ME IF YOU HAVE ANY QUESTIONS.

SINCERELY,

ROBERT C WEBSTER
COL D.C.
AWC CLASS OF '85

BOX #453
HOME TEL: 243-8771

SENT TO: SIXTEEN (16) STUDENTS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